

**REMARKS**

The Examiner is thanked for the thorough examination of the present application. The patentability of the claims is discussed in greater detail below. Favorable reconsideration is respectfully requested.

**I. Claims 1, 19, 20, and 28 are Patentable**

The Examiner rejected independent claims 1, 20, and 28 as unpatentable over U.S. Patent No. 6,587,476 to Lewin et al. ("the Lewin patent"). For the above noted independent claims, the Examiner correctly notes that signal processing unit 86 fails to disclose lines to switch the signal processing unit between a transmit mode and a receive mode. However, the Examiner incorrectly maintains that "a mode line or an equivalent would be inherent in the design of Lewin et al. since the design as shown in Fig(s) 5 and 6 is bi-directional between the transceivers".

For example, as shown in FIG. 6, there is a line for signal TxENABLE to switch signal processing unit 84 to a transmit mode. In addition, there is a line for signal RxENABLE to switch signal processing unit 82 to a receive mode. However, there is no signal RxENABLE to switch signal processing unit 84 to a receive mode. Likewise, there is no signal TxENABLE to switch signal processing unit 82 to a receive mode.

In contrast, independent claim 1, for example, recites a mode line connected to each signal processing unit for switching each signal processing unit between a transmit mode and a receive mode. The Lewin patent fails to disclose such because it only discloses switching one of the signal

processing units to transmit and the other signal processing unit to receive. In other words, the identified signals in FIG. 6 fail to switch each signal processing unit to both transmit and receive. Independent claims 20 and 28 recite features similar to claim 1.

Further addressing the inherency argument, the Examiner asserts that a mode line or its equivalent is required because the Lewin patent discloses bi-directional transceivers. Such an argument ignores a connectionless protocol in which data can be sent from one signal processing unit to another without any prior arrangement and/or under the direction of a mode line connected to each signal processing unit to control the transmitting and receiving of a respective signal processing unit.

For example, signal processing unit 84 uses HDLC (see FIG. 6), and HDLC has three operational modes, which include Normal Response Mode ("NRM"), Asynchronous Response Mode ("ARM"), and Asynchronous Balanced Mode ("ABM"). Both the ARM and ABM modes permit a signal processing unit to transfer frames without receiving instructions for such externally. Stated another way, there are many protocols available where groups of signal processing units can bi-directionally transmit without the need for a mode line connected to each signal processing unit to control such transmissions.

Accordingly, it is submitted that independent claims 1, 20, and 28 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

## **II. Claims 2, 3, 17, and 18 are Patentable**

The Examiner rejected independent claims 2 and 3 as unpatentable over U.S. Patent No. 6,366,622 to Brown et al. ("the Brown patent"). The Examiner correctly notes that the Brown patent discloses signal processing units 1219, 1222, 1226, and 1230. The Examiner also cites the following excerpts from the Brown patent:

"The controller 1106 takes care of the forward error correction, error detection (i.e. CRC calculations), payload extraction, ARC (Automatic Repeat Request) and flow control, along with general control functions." See column 25, lines 48-51.

And, "The RX/TX state machine 1242 performs radio state control and the selection and sequencing of processing actions through FEC, dewhiten, etc. This is a pre-determined sequence of on-off control of the blocks that make up the radio 1102 and data processing 1218-1238, depending on which top-level state is required and what packet type is being processed." See column 26, lines 44-50.

In contrast, independent claim 2, for example, recites a control line to which each signal processing unit is connected, the control line communicating flow control information to stall at least one of the preceding signal processing units for feedback control of the signal processing units. The Brown patent fails to disclose such because it teaches "a pre-determined sequence of on-off control of the blocks that make up the radio 1102 and data processing 1218-

1238, depending on which top-level state is required and what packet type is being processed". In other words, the Brown patent teaches turning on-off the data processing in each signal processing unit 1219, 1222, 1226, and 1230 block, but fails to teach that such is for feedback control of the signal processing units as a group.

Independent claim 3 recites features similar to claim 2. Accordingly, it is submitted that independent claims 2 and 3 are patentable over the prior art. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

### **III. Claims 4, 7, 10, 13, and 16 are Patentable**

The Examiner rejected dependent claims 4, 7, 10, 13, and 16 as unpatentable over the Lewin patent in view of one of U.S. Patent No. 6,108,713 to Sambamurthy et al. ("the Sambamurthy patent"), U.S. Patent No. 4,686,668 to Koseki et al. ("the Koseki patent"), and U.S. Patent No. 5,349,647 to Freiburg et al. ("the Freiburg patent"). Each of the claims 4, 7, 10, 13, and 16 are based on a claim patentable over the Lewin patent, as argued above in section I. The Sambamurthy, Koseki, and Freiburg patents fail to disclose the claimed mode line that the Lewin patent also failed to disclose. Consequently, claims 4, 7, 10, 13, and 16 are patentable because all of the proposed combinations fail to disclose all the claimed recitations.

**IV. Claims 5, 6, 8, 9, 11, 12, 14, and 15 are Patentable**

The Examiner rejected dependent claims 5, 6, 8, 9, 11, 12, 14, and 15 as unpatentable over the Brown patent in view of one of U.S. Patent No. 6,108,713 to Sambamurthy et al. ("the Sambamurthy patent"), U.S. Patent No. 4,686,668 to Koseki et al. ("the Koseki patent"), and U.S. Patent No. 5,349,647 to Freiburg et al. ("the Freiburg patent"). Each of the claims 5, 6, 8, 9, 11, 12, 14, and 15 are based on a claim patentable over the Brown patent, as argued above in section II. The Sambamurthy, Koseki, and Freiburg patents fail to disclose the claimed control line to stall at least one of the preceding signal processing units for feedback control of the signal processing units that the Brown patent also failed to disclose. Consequently, claims 5, 6, 8, 9, 11, 12, 14, and 15 are patentable because all of the proposed combinations fail to disclose all the claimed recitations.

**V. Claims 21 and 22 are Patentable**

The Examiner rejected independent claims 21 and 22 as unpatentable over U.S. Published Application No. 2003/0096634 to Lin ("the Lin patent") in view of U.S. Patent No. 6,650,880 to Lee et al. ("the Lee patent") and further in view of U.S. Patent No. 6,366,622 to Brown et al. ("the Brown patent"). The Examiner correctly notes that both the Lin and the Lee patents fail to disclose the claimed control line.

Independent claim 21, for example, recites a control line to which each signal processing unit is connected, with the control line communicating flow control information to stall at least one of the preceding signal processing units for feedback control of the signal processing units. As

argued above in section II, the Brown patent also fails to disclose such a control line. Independent claim 22 recites features similar to claim 21. Accordingly, it is submitted that independent claims 21 and 22 are patentable over the prior art.

#### **V. CONCLUSIONS**

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

No fee is believed due with this Amendment, however, should a fee be required please charge Deposit Account 50-0510. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

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Respectfully submitted,

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